List of Publications

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Total number of citations: 2097, h-index: 25 (from Google Scholar, July 23, 2021).

1. Peer-reviewed original articles

[1] A. Güemes, S. Discetti, A. Ianiro, B. Sirmacek, H. Azizpour and **R. Vinuesa**. From coarse wall measurements to turbulent velocity fields through deep learning. *Phys. Fluids*, 2021. Accepted.

[2] H. Eivazi, L. Guastoni, P. Schlatter, H. Azizpour and **R. Vinuesa**. Recurrent neural networks and Koopman-based frameworks for temporal predictions in a low-order model of turbulence. *Int. J. Heat Fluid Flow*, **90**, 108816, 2021.

[3] C. Jiang, **R. Vinuesa**, R. Chen, J. Mi, S. Laima and H. Li. An interpretable framework of data-driven turbulence modeling using deep neural networks. *Phys. Fluids*, **33**, 055133, 2021.

[4] W. Naudé and **R. Vinuesa**. Data deprivations, data gaps and digital divides: lessons from the COVID-19 pandemic. *Big Data Soc.*, 2021. Accepted.

[5] **R. Vinuesa**. High-fidelity simulations in complex geometries: towards better flow understanding and development of turbulence models. *Res. Eng.*, 2021. Accepted.

[6] M. Atzori, **R. Vinuesa**, A. Lozano-Durán and P. Schlatter. Intense Reynolds-stress events in turbulent ducts. *Int. J. Heat Fluid Flow*, **89**, 108802, 2021.

[7] S. Rezaeiravesh, **R. Vinuesa** and P. Schlatter. On numerical uncertainties in scale-resolving simulations of canonical wall turbulence. *Comput. Fluids*, **227**, 105024, 2021.

[8] G. Fahland, A. Stroh, B. Frohnapfel, M. Atzori, **R. Vinuesa**, P. Schlatter and D. Gatti. Investigation of blowing and suction for turbulent flow control on airfoils. *AIAA J.*, 2021. Accepted.

[9] M. Stuck, A. Vidal, P. Torres, H. M. Nagib, C. Wark and **R. Vinuesa**. Spectral-element simulation of the turbulent flow in an urban environment. *Appl. Sci.*, **11**, 6472, 2021.

[10] C. Hedenqvist, M. Romero and **R. Vinuesa**. Improved learning of Mechanics through augmented reality. *Technol. Knowl. Learn.*, 2021. Accepted.

[11] S. Gupta, S. D. Langhans, S. Domisch, F. Fuso Nerini, A. Felländer, M. Battaglini, M. Tegmark and **R. Vinuesa**. Assessing whether artificial intelligence is an enabler or an inhibitor of sustainability at indicator level. *Transp. Eng.*, **4**, 100064, 2021.

[12] P. Torres, S. Le Clainche and **R. Vinuesa**. On the experimental, numerical and data-driven methods to study urban flows. *Energies*, **14**, 1310, 2021.

[13] R. Raman, K. Achuthan, **R. Vinuesa** and P. Nedungadi. COVIDTAS COVID-19 tracing app scale – An evaluation framework. *Sustainability*, **13**, 2912, 2021.

[14] M. Shahroz, F. Ahmad, M. S. Younis, N. Ahmad, M. N. K. Boulos, **R. Vinuesa** and J. Qadir. COVID-19 digital contact tracing applications and techniques: a review post initial deployments. *Transp. Eng.*, **5**, 100072, 2021.

[15] M. Atzori, W. Köpp, S. W. D. Chien, D. Massaro, F. Mallor, A. Peplinski, M. Rezaei, N. Jansson, S. Markidis, **R. Vinuesa**, E. Laure, P. Schlatter and T. Weinkauf. In-situ visualization of large-scale turbulence simulations in Nek5000 with ParaView Catalyst. *J. Supercomput.*, 2021. Accepted.

[16] A. Corrochano, D. Xavier, P. Schlatter, **R. Vinuesa** and S. Le Clainche. Flow structures on a planar Food and Drug Administration (FDA) nozzle at low and intermediate Reynolds number. *Fluids*, **6**, 4, 2021.

[17] N. Tabatabaei, R. Örlü, **R. Vinuesa** and P. Schlatter. Aerodynamic free-flight conditions in wind-tunnel modelling through reduced-order wall inserts. *Fluids*, 2021. Accepted.

[18] S. Rezaeiravesh, **R. Vinuesa** and P. Schlatter. UQit: A Python package for uncertainty quantification (UQ) in computational fluid dynamics (CFD). *J. Open Source Softw.*, **6**, 2871, 2021.

[19] R. Raman, **R. Vinuesa** and P. Nedungadi. Bibliometric analysis of SARS, MERS, and COVID-19 studies from India and connection to Sustainable Development Goals. *Sustainability*, **13**, 7555, 2021.

[20] Momtazmanesh *et al.* International scientific collaboration is needed to bridge science to society: USERN2020 consensus statement. *SN Compr. Clin. Med.*, **3**, 1699–1703, 2021.

[21] **R. Vinuesa**, H. Azizpour, I. Leite, M. Balaam, V. Dignum, S. Domisch, A. Felländer, S. D. Langhans, M. Tegmark and F. Fuso Nerini. The role of artificial intelligence in achieving the Sustainable Development Goals. *Nat. Commun.*, **11**, 233, 2020.

[22] R. Örlü and **R. Vinuesa**. Instantaneous wall-shear-stress measurements: advances and application to near-wall extreme events. *Meas. Sci. Technol.*, **31**, 112001, 2020.

[23] Y. Fan, W. Li, M. Atzori, R. Pozuelo, P. Schlatter and **R. Vinuesa**. Decomposition of the mean friction drag in adverse-pressure-gradient turbulent boundary layers. *Phys. Rev. Fluids*, **5**, 114608, 2020.

[24] A. Tanarro, **R. Vinuesa** and P. Schlatter. Effect of adverse pressure gradients on turbulent wing boundary layers. *J. Fluid Mech.*, **883**, A8, 2020.

[25] L. I. Abreu, A. V. G. Cavalieri, P. Schlatter, **R. Vinuesa** and D. S. Henningson. SPOD and resolvent analysis of near-wall coherent structures in turbulent pipe flows. *J. Fluid Mech.*, **900**, A11, 2020.

[26] C. Sanmiguel Vila, **R. Vinuesa**, S. Discetti, A. Ianiro, P. Schlatter and R. Örlü. Separating adverse-pressure-gradient and Reynolds-number effects in turbulent boundary layers. *Phys. Rev. Fluids*, **5**, 064609, 2020.

[27] R. C. Chin, **R. Vinuesa**, R. Örlü, J. I. Cardesa, A. Noorani, M. S. Chong and P. Schlatter. Back-flow events under the effect of secondary flow of Prandtl's first kind. *Phys. Rev. Fluids*, **5**, 074606, 2020.

[28] **R. Vinuesa**, A. Theodorou, M. Battaglini and V. Dignum. A socio-technical framework for digital contact tracing. *Results Eng.*, **8**, 100163, 2020.

[29] A. Dróżdż, W. Elsner, P. Niegodajew, **R. Vinuesa**, R. Örlü and P. Schlatter. A description of turbulence intensity profiles for boundary layers with adverse pressure gradient. *Eur. J. Mech. B/Fluids*, **84**, 470–477, 2020.

[30] C. Sanmiguel Vila, **R. Vinuesa**, S. Discetti, A. Ianiro, P. Schlatter and R. Örlü. Experimental realisation of near-equilibrium adverse-pressure-gradient turbulent boundary layers. *Exp. Thermal Fluid Sci.*, **112**, 109975, 2020.

[31] C. Amor, J. M. Pérez, P. Schlatter, **R. Vinuesa** and S. Le Clainche. Modeling the turbulent wake behind a wall-mounted square cylinder. *Log. J. IGPL*, jzaa060, 2020.

[32] N. Sánchez Abad, **R. Vinuesa**, P. Schlatter, M. Andersson and M. Karlsson. Simulation strategies for the Food and Drug Administration nozzle using Nek5000. *AIP Adv.*, **10**, 025033, 2020.

[33] M. Atzori, **R. Vinuesa**, G. Fahland, A. Stroh, D. Gatti, B. Frohnapfel and P. Schlatter. Aerodynamic effects of uniform blowing and suction on a NACA4412 airfoil. *Flow Turbul. Combust.*, **105**, 735–759, 2020.

[34] A. Tanarro, F. Mallor, N. Offermans, A. Peplinski, **R. Vinuesa** and P. Schlatter. Enabling adaptive mesh refinement for spectral-element simulations of turbulence around wing sections. *Flow Turbul. Combust.*, **105**, 415–436, 2020.

[35] L. I. Abreu, A. V. G. Cavalieri, P. Schlatter, **R. Vinuesa** and D. S. Henningson. Resolvent modelling of near-wall coherent structures in turbulent channel flow. *Int. J. Heat Fluid Flow*, **85**, 108662, 2020.

[36] A. Karnama and **R. Vinuesa**. Organic growth theory for corporate sustainability. *Sustainability*, **12**, 8523, 2020.

[37] P. A. Srinivasan, L. Guastoni, H. Azizpour, P. Schlatter and **R. Vinuesa**. Predictions of turbulent shear flows using deep neural networks. *Phys. Rev. Fluids*, **4**, 054603, 2019.

[38] K. Sasaki, **R. Vinuesa**, A. V. G. Cavalieri, P. Schlatter and D. S. Henningson. Transfer functions for flow predictions in wall-bounded turbulence. *J. Fluid Mech.*, **864**, 708–745, 2019.

[39] E. Dogan, R. Örlü, D. Gatti, **R. Vinuesa** and P. Schlatter. Quantification of amplitude modulation in wall-bounded turbulence. *Fluid Dyn. Res.*, **51**, 011408, 2019.

[40] H. M. Nagib, A. Vidal and **R. Vinuesa**. Vorticity fluxes: A tool for three-dimensional and secondary flows in turbulent shear flows. *J. Fluids Struct.*, **89**, 39–48, 2019.

[41] F. Schenk and **R. Vinuesa**. Enhanced large-scale atmospheric flow interaction with ice sheets at high model resolution. *Results Eng.*, **3**, 100030, 2019.

[42] A. Güemes, C. Sanmiguel Vila, R. Örlü, **R. Vinuesa**, P. Schlatter, A. Ianiro and S. Discetti. Flow organization in the wake of a rib in a turbulent boundary layer with pressure gradient. *Exp. Thermal Fluid Sci.*, **108**, 115–124, 2019.

[43] S. Straub, P. Forooghi, L. Marocco, T. Wetzel, **R. Vinuesa**, P. Schlatter and B. Frohnapfel. The influence of thermal boundary conditions on turbulent forced convection pipe flow at two Prandtl numbers. *Int. J. Heat Mass Transf.*, **144**, 118601, 2019.

[44] A. Karnama, E. B. Haghighi and **R. Vinuesa**. Organic data centers: a sustainable solution for computing facilities. *Results Eng.*, **4**, 100063, 2019.

[45] A. Vidal, H. M. Nagib, P. Schlatter and **R. Vinuesa**. Secondary flow in spanwise-periodic in-phase sinusoidal channels. *J. Fluid Mech.*, **851**, 288–316, 2018.

[46] **R. Vinuesa**, P. S. Negi, M. Atzori, A. Hanifi, D. S. Henningson and P. Schlatter. Turbulent boundary layers around wing sections up to $Re_c = 1,000,000$. *Int. J. Heat Fluid Flow*, **72**, 86–99, 2018.

[47] B. Monnier, S. A. Goudarzi, **R. Vinuesa** and C. Wark. Turbulent structure of a simplified urban fluid flow studied through stereoscopic particle image velocimetry. *Boundary-Layer Meteorol.*, **166**, 239–268, 2018.

[48] **R. Vinuesa**, P. Schlatter and H. M. Nagib. Secondary flow in turbulent ducts with increasing aspect ratio. *Phys. Rev. Fluids*, **3**, 054606, 2018.

[49] S. Rezaeiravesh, **R. Vinuesa**, M. Liefvendahl and P. Schlatter. Assessment of uncertainties in hot-wire anemometry and oil-film interferometry measurements for wall-bounded turbulent flows. *Eur. J. Mech. B/Fluids*, **72**, 57–73, 2018.

[50] E. Otero, **R. Vinuesa**, O. Marin, E. Laure and P. Schlatter. Lossy data compression effects on wall-bounded turbulence: bounds on data reduction. *Flow Turbul. Combust.*, **101**, 365–387, 2018.

[51] P. S. Negi, **R. Vinuesa**, A. Hanifi, P. Schlatter and D. S. Henningson. Unsteady aerodynamic effects in small-amplitude pitch oscillations of an airfoil. *Int. J. Heat Fluid Flow*, **71**, 378–391, 2018.

[52] A. Vidal, **R. Vinuesa**, P. Schlatter and H. M. Nagib. Turbulent rectangular ducts with minimum secondary flow. *Int. J. Heat Fluid Flow*, **72**, 317–328, 2018.

[53] A. Vidal, H. M. Nagib and **R. Vinuesa**. Vorticity fluxes and secondary flow: Relevance for turbulence modelling. *Phys. Rev. Fluids*, **3**, 072602(R), 2018.

[54] **R. Vinuesa**, S. M. Hosseini, A. Hanifi, D. S. Henningson and P. Schlatter. Pressure-gradient turbulent boundary layers developing around a wing section. *Flow Turbul. Combust.*, **99**, 613–641, 2017.

[55] **R. Vinuesa**, R. Örlü, C. Sanmiguel Vila, A. Ianiro, S. Discetti and P. Schlatter. Revisiting history effects in adverse-pressure-gradient turbulent boundary layers. *Flow Turbul. Combust.*, **99**, 565–587, 2017.

[56] S. Straub, **R. Vinuesa**, P. Schlatter, B. Frohnapfel and D. Gatti. Turbulent duct flow controlled with spanwise wall oscillations. *Flow Turbul. Combust.*, **99**, 787–806, 2017.

[57] C. Sanmiguel Vila, R. Örlü, **R. Vinuesa**, P. Schlatter, A. Ianiro and S. Discetti. Adverse-pressure-gradient effects on turbulent boundary layers: statistics and flow-field organization. *Flow Turbul. Combust.*, **99**, 589–612, 2017.

[58] A. Vidal, **R. Vinuesa**, P. Schlatter and H. M. Nagib. Influence of corner geometry on the secondary flow in turbulent square ducts. *Int. J. Heat Fluid Flow*, **67**, 69–78, 2017.

[59] A. Bobke, **R. Vinuesa**, R. Örlü and P. Schlatter. History effects and near equilibrium in adverse-pressure-gradient turbulent boundary layers. *J. Fluid Mech.*, **820**, 667–692, 2017.

[60] C. Sanmiguel Vila, **R. Vinuesa**, S. Discetti, A. Ianiro, P. Schlatter and R. Örlü. On the identification of well-behaved turbulent boundary layers. *J. Fluid Mech.*, **822**, 109–138, 2017.

[61] **R. Vinuesa**, R. Örlü and P. Schlatter. Characterisation of backflow events over a wing section. *J. Turbul.*, **18**, 170–185, 2017.

[62] C. Prus, **R. Vinuesa**, P. Schlatter, E. Tembrás, E. Mestres and J. P. Berro Ramírez. Impact simulation and optimisation of elastic fuel tanks reinforced with exoskeleton for aerospace applications. *Int. J. Crashworthiness*, **22**, 271–293, 2017.

[63] S. M. Hosseini, **R. Vinuesa**, P. Schlatter, A. Hanifi and D. S. Henningson. Direct numerical simulation of the flow around a wing section at moderate Reynolds number.[1] *Int. J. Heat Fluid Flow*, **61**, 117–128, 2016.

[64] O. Marin, **R. Vinuesa**, A. V. Obabko and P. Schlatter. Characterization of the secondary flow in hexagonal ducts. *Phys. Fluids*, **28**, 125101, 2016.

[65] **R. Vinuesa**, C. Prus, P. Schlatter and H. M. Nagib. Convergence of numerical simulations of turbulent wall-bounded flows and mean cross-flow structure of rectangular ducts. *Meccanica*, **51**, 3025–3042, 2016.

[66] A. Noorani, **R. Vinuesa**, L. Brandt and P. Schlatter. Aspect ratio effect on particle transport in turbulent duct flows. *Phys. Fluids*, **28**, 105103, 2016.

[67] **R. Vinuesa**, A. Bobke, R. Örlü and P. Schlatter. On determining characteristic length scales in pressure-gradient turbulent boundary layers. *Phys. Fluids*, **27**, 105107, 2016.

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[68] **R. Vinuesa**, R. D. Duncan and H. M. Nagib. Alternative interpretation of the Superpipe data and motivation for CICLoPE: the effect of a decreasing viscous length scale. *Eur. J. Mech. B/Fluids*, **58**, 109–116, 2016.

[69] **R. Vinuesa**, L. F. de Arévalo, M. Luna and H. Cachafeiro. Simulations and experiments of heat loss from a parabolic trough absorber tube over a range of pressures and gas compositions in the vacuum chamber. *J. Renew. Sustain. Energy*, **8**, 023701, 2016.

[70] **R. Vinuesa** and H. M. Nagib. Enhancing the accuracy of measurement techniques in high Reynolds number turbulent boundary layers for more representative comparison to their canonical representations. *Eur. J. Mech. B/Fluids*, **55**, 300–312, 2016.

[71] A. Samanta, **R. Vinuesa**, I. Lashgari, P. Schlatter and L. Brandt. Enhanced secondary motion of the turbulent flow through a porous square duct. *J. Fluid Mech.*, **784**, 681–693, 2015.

[72] **R. Vinuesa**, M. H. Hites, C. E. Wark and H. M. Nagib. Documentation of the role of large-scale structures in the bursting process in turbulent boundary layers. *Phys. Fluids*, **27**, 105107, 2015.

[73] **R. Vinuesa**, P. Schlatter, J. Malm, C. Mavriplis and D. S. Henningson. Direct numerical simulation of the flow around a wall-mounted square cylinder under various inflow conditions. *J. Turbul.*, **16**, 555–587, 2015.

[74] **R. Vinuesa**, P. Schlatter and H. M. Nagib. On minimum aspect ratio for duct-flow facilities and the role of side walls in generating secondary flows. *J. Turbul.*, **16**, 588–606, 2015.

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[76] **R. Vinuesa**, E. Bartrons, D. Chiu, K. M. Dressler, J.-D. Rüedi, Y. Suzuki and H. M. Nagib. New insight into flow development and two dimensionality of turbulent channel flows. *Exp. Fluids*, **55**, 1759, 2014.

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[78] **R. Vinuesa**, P. H. Rozier, P. Schlatter and H. M. Nagib. Experiments and computations of localized pressure gradients with different history effects. *AIAA J.*, **52**, 368–384, 2014.

[79] S. C. C. Bailey, M. Hultmark, J. P. Monty, P. H. Alfredsson, M. S. Chong, R. D. Duncan, J. H. M. Fransson, N. Hutchins, I. Marusic, B. J. McKeon, H. M. Nagib, R. Örlü, A. Segalini, A. J. Smits and **R. Vinuesa**. Obtaining accurate mean velocity measurements in high Reynolds number turbulent boundary layers using Pitot tubes. *J. Fluid Mech.*, **715**, 642–670, 2013.

2. Peer-reviewed conference articles

[1] L. Guastoni, M. P. Encinar, P. Schlatter, H. Azizpour and **R. Vinuesa**. Prediction of wall-bounded turbulence from wall quantities using convolutional neural networks. *J. Phys.: Conf. Ser.*, **1522**, 012022, 2020.

[2] M. Atzori, **R. Vinuesa**, A. Lozano-Durán and P. Schlatter. Coherent structures in turbulent boundary layers over an airfoil. *J. Phys.: Conf. Ser.*, **1522**, 012020, 2020.

[2] This paper provided one of the cover images for the International Symposium on Turbulence & Shear Flow Phenomena (TSFP-10).

[3] C. Amor C., J. M. Pérez, P. Schlatter, **R. Vinuesa** and S. Le Clainche. Soft computing techniques to analyze the turbulent wake of a wall-mounted square cylinder. *Advances in Intelligent Systems and Computing, Springer*, **950**, 2020.

[4] A. Friederici, W. Köpp, M. Atzori, **R. Vinuesa**, P. Schlatter and T. Weinkauf. Distributed percolation analysis for turbulent flows.[3] *In: IEEE 9th Symposium on Large Data Analysis and Visualization (LDAV), Vancouver, Canada, October 21*, 2019.

[5] W. Köpp, A. Friederici, M. Atzori, **R. Vinuesa**, P. Schlatter and T. Weinkauf. Notes on percolation analysis of sampled scalar fields. *In: Topology-Based Methods in Visualization (TopoInVis), Nyköping, Sweden, June17–19*, 2019.

[6] A. Tanarro, **R. Vinuesa** and P. Schlatter. Power-spectral density in turbulent boundary layers on wings. *Direct and Large-Eddy Simulation (DLES12)*, Madrid (Spain), June 5–7, 2019.

[7] M. Atzori, **R. Vinuesa**, D. Gatti, A. Stroh, B. Frohnapfel and P. Schlatter. Effects of different friction control techniques on turbulence developing around wings. *Direct and Large-Eddy Simulation (DLES12)*, Madrid (Spain), June 5–7, 2019.

[8] L. Guastoni, P. A. Srinivasan, H. Azizpour, P. Schlatter and **R. Vinuesa**. On the use of recurrent neural networks for predictions of turbulent flows. *Proc. Intern. Symp. on Turbulence & Shear Flow Phenomena (TSFP-11), Southampton, UK, July 30 - August 2*, 2019.

[9] A. Tanarro, F. Mallor, N. Offermans, A. Peplinski, **R. Vinuesa** and P. Schlatter. Using adaptive mesh refinement to simulate turbulent wings at high Reynolds numbers. *Proc. Intern. Symp. on Turbulence & Shear Flow Phenomena (TSFP-11), Southampton, UK, July 30 - August 2*, 2019.

[10] M. Atzori, **R. Vinuesa**, A. Lozano-Durán and P. Schlatter. Contribution of Reynolds-stress structures to the secondary flow in turbulent duct. *Proc. Intern. Symp. on Turbulence & Shear Flow Phenomena (TSFP-11), Southampton, UK, July 30 - August 2*, 2019.

[11] L. I. Abreu, A. V. G. Cavalieri, P. Schlatter, **R. Vinuesa** and D. S. Henningson. Reduced-order models to analyse coherent structures in turbulent pipe flow. *Proc. Intern. Symp. on Turbulence & Shear Flow Phenomena (TSFP-11), Southampton, UK, July 30 - August 2*, 2019.

[12] C. Sanmiguel Vila, **R. Vinuesa**, S. Discetti, A. Ianiro, P. Schlatter and R. Örlü. Large-scale energy in turbulent boundary layers: Reynolds-number and pressure-gradient effects. *Progress in Turbulence VIII, iTi 2018, Springer Proceedings in Physics, Springer, Cham*, **226**. 2019.

[13] **R. Vinuesa**, P. S. Negi, M. Atzori, A. Hanifi, D. S. Henningson and P. Schlatter. Reynolds-number effects in turbulent boundary layers around wing sections. *Proc. 12th ERCOFTAC Symp. on Engineering Turbulence Modelling and Measurements (ETMM12), Montpellier, France, September 26–28*, 2018.

[14] M. Atzori, **R. Vinuesa**, A. Stroh, B. Frohnapfel and P. Schlatter. Assessment of skin-friction-reduction techniques on a turbulent wing section. *Proc. 12th ERCOFTAC Symp. on Engineering Turbulence Modelling and Measurements (ETMM12), Montpellier, France, September 26–28*, 2018.

[15] A. Tanarro, **R. Vinuesa** and P. Schlatter. History effects for cambered and symmetric wing profiles. *Proc. 12th ERCOFTAC Symp. on Engineering Turbulence Modelling and Measurements (ETMM12), Montpellier, France, September 26–28*, 2018.

[3] This article was awarded a Best Paper Honorable Mention at the 9th IEEE Symposium LDAV 2019.

[16] E. Dogan, R. Örlü, D. Gatti, **R. Vinuesa** and P. Schlatter. Revisiting the amplitude modulation in wall-bounded turbulence: towards a robust definition. *Proc. 12th ERCOFTAC Symp. on Engineering Turbulence Modelling and Measurements (ETMM12), Montpellier, France, September 26–28*, 2018.

[17] R. Örlü, C. Sanmiguel Vila, **R. Vinuesa**, A. Ianiro, S. Discetti and P. Schlatter. Scaling of adverse-pressure-gradient turbulent boundary layers. *Proc. 5th International Conference on Experimental Fluid Mechanics ICEFM, Munich, Germany, July 2–4*, 2018.

[18] M. Atzori, **R. Vinuesa**, A. Lozano-Durán and P. Schlatter. Characterization of turbulent coherent structures in square duct flow. *J. Phys.: Conf. Ser.*, **1001**, 012008, 2018.

[19] C. Chin, **R. Vinuesa**, R. Örlü, J. I. Cardesa, A. Noorani, P. Schlatter and M. S. Chong. Flow topology of rare back flow events and critical points in turbulent channels and toroidal pipes. *J. Phys.: Conf. Ser.*, **1001**, 012002, 2018.

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[21] **R. Vinuesa**, A. Bobke, R. Örlü and P. Schlatter. Scaling of adverse-pressure-gradient turbulent boundary layers in near-equilibrium conditions. *Progress in Turbulence VII, iTi 2016, Springer Proceedings in Physics, Springer, Cham*, **196**. 2017.

[22] **R. Vinuesa**, P. Negi, A. Hanifi, D. S. Henningson and P. Schlatter. High-fidelity simulations of the flow around wings at high Reynolds numbers. *Proc. Intern. Symp. on Turbulence & Shear Flow Phenomena (TSFP-10)*, Chicago, USA, July 6-9, 2017.

[23] R. Örlü, **R. Vinuesa**, C. Sanmiguel Vila, A. Bobke, S. Discetti, A. Ianiro and P. Schlatter. Towards canonical adverse-pressure-gradient turbulent boundary layers — Experiments and simulations. *Proc. Intern. Symp. on Turbulence & Shear Flow Phenomena (TSFP-10)*, Chicago, USA, July 6-9, 2017.

[24] P. Negi, **R. Vinuesa**, P. Schlatter, A. Hanifi and D. S. Henningson. Unsteady aerodynamic effects in pitching airfoils studied through large-eddy simulation. *Proc. Intern. Symp. on Turbulence & Shear Flow Phenomena (TSFP-10)*, Chicago, USA, July 6-9, 2017.

[25] A. Vidal, **R. Vinuesa**, P. Schlatter and H. M. Nagib. Impact of corner geometry on the secondary flow in turbulent ducts. *Proc. Intern. Symp. on Turbulence & Shear Flow Phenomena (TSFP-10)*, Chicago, USA, July 6-9, 2017.

[26] E. Otero, O. Marin, **R. Vinuesa**, P. Schlatter and A. Siegel. The effect of lossy data compression on computational fluid dynamics applications: resilience and data postprocessing. *Direct and Large-Eddy Simulation (DLES11)*, Pisa (Italy), May 29-31, 2017.

[27] V. Ryzhenkov, V. Ivashchenko, **R. Vinuesa** and R. Mullyadzhanov. Spectral-element simulations of variable-density turbulent flow in a plane channel. *EPJ Web of Conf.*, **159**, 00041, 2017.

[28] **R. Vinuesa**, S. M. Hosseini, A. Hanifi, D. S. Henningson and P. Schlatter. Assessment of turbulent boundary layers on a NACA4412 wing section at moderate *Re*. *Proc. 11th ERCOFTAC Symp. on Engineering Turbulence Modelling and Measurements (ETMM11)*, Palermo (Italy), September 21-23, 2016.

[29] P. Schlatter, **R. Vinuesa**, A. Bobke and R. Örlü. History effects and near-equilibrium in turbulent boundary layers with pressure gradient. *Proc. 11th ERCOFTAC Symp. on Engineering Turbulence Modelling and Measurements (ETMM11)*, Palermo (Italy), September 21-23, 2016.

[30] R. Örlü, C. Sanmiguel Vila, **R. Vinuesa**, S. Discetti, A. Ianiro and P. Schlatter. Tripping effects in low-Reynolds number turbulent boundary layers. *Proc. 11th ERCOFTAC Symp. on Engineering Turbulence Modelling and Measurements (ETMM11)*, Palermo (Italy), September 21-23, 2016.

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